

REMARKS

Claims 1-9 remain pending in this application with claims 2 and 7 being amended by this response.

Objection to Claims 2-5 and 7-9

Claims 2-5 and 7-9 are objected to for certain informalities. Claims 2 and 7 have been amended in accordance with the comments in the Office Action to explain the term SPD. In view of the amendments to claims 2 and 7, it is respectfully submitted that this objection is satisfied and should be withdrawn.

Rejection of Claims 1, 2, 6, and 7 under 35 U.S.C 103(a)

Claims 1, 2, 6, and 7 are rejected under 35 U.S.C 103(a) as being unpatentable over Roberts et al. (U.S. Patent No. 6,405,022) in view of Samuels (U.S. Patent Application No. 2001/0044280).

The present claimed invention provides a VHF adapter for cable network. The adapter includes a first down conversion chain and a second up conversion chain. The first chain includes a first mixer followed by a second mixer. The second chain includes a third mixer followed by a fourth mixer and by a fifth mixer. All the local frequencies necessary for these five mixers are obtained from a very stable single reference oscillator. The oscillator is associated with SAW filters. Claim 6 provides a radio-frequency transmission system wherein all the local frequencies necessary for the five mixers of the VHF adapter are obtained from a single reference oscillator. Claim 6 includes similar features to claim 1 and thus all arguments present hereinbelow regarding claim 1 also apply to claim 6.

Roberts et al. describe a radio frequency transceiver with first and second intermediate frequency signals. A synthesizer circuit is connected to the transmit mixers. Thus, the frequency hopping local oscillator is common to two respective mixing circuits of each of the transmitter and receiver circuits. However, Roberts et al. describe (column 3 lines

24-33) that one Voltage Controlled Oscillator (VCO) has dual conversion and that additional VCO's are used to form first and second respective intermediate frequencies. As shown in figure 2, the TX frequency translation loop 34 need a second VCO 68 to form intermediate frequency f2 and the modem PLL 32 needs a third VCO 60 to form intermediate frequency f3. Thus, Roberts et al. neither disclose nor suggest "all the local frequencies necessary for these five mixers are obtained from a very stable single reference oscillator" as recited in claim 1.

Samuels also describes a transceiver system with chains of down conversion and up conversion. As Samuels relates to the generation of local frequencies, the frequencies for the up and down conversion are generated by SHF, UHF and VHF. Figure 6 and the corresponding text describe a UHF frequency synthesiser 603 and a VHF signal generator 605. Figure 7 describes a third one the SHF synthesiser 719. Thus, Samuels, similarly to Roberts, neither discloses nor suggests "all the local frequencies necessary for these five mixers are obtained from a very stable single reference oscillator" as recited in claim 1.

For the same reasons as exposed above, neither Roberts nor Samuels, taken either singly or in combination, discloses the use of a single reference oscillator in a radio frequency transmission system and affects the patentability of Claim 6.

As the individual systems of Roberts and Samuels neither disclose nor suggest that "all the local frequencies necessary for these five mixers are obtained from a very stable single reference oscillator" as recited in claims 1 and 6 of the present claimed invention, the combination of Roberts and Samuels also cannot disclose or suggest this feature. Thus, it is respectfully submitted that claims 1 and 6 are patentable over Roberts and Samuels when taken alone or in combination.

In view of the above remarks to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure in Roberts et al. and Samuels, when taken alone or in combination, that would make the present invention as claimed in claims 1 and 6 unpatentable. As claims 2 and 7 are dependent on claims 1 and 6, respectively, it is

respectfully submitted that these claims are also patentable. In view of the above remarks it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of Claims 3-5, 8 and 9 under 35 U.S.C 103(a)

Claims 3-5, 8 and 9 are rejected under 35 U.S.C 103(a) as being unpatentable over Roberts et al. (U.S. Patent No. 6,405,022) in view of Samuels (U.S. Patent Application No. 2001/0044280) as applied to claims 1 and 2 above, and further in view of Shenoy (U.S. Patent Application No. 6,310,386).

Shenoy describes the combination of SAW filters and two synthesizers (614, 634). Shenoy provides a packaged semiconductor circuit for use in processing digital and RF signals. The packaged semiconductor circuit includes a package structure having a first side that includes a metallization layer. The metallization layer has a first part at about a center of the first side and a second part that surrounds the center. The circuit further includes a semiconductor die that is attached to the package structure at about the first part of the metallization layer. The semiconductor die has an interconnection side including an array of bumps that are configured to make electrical connection to selected ones of a first plurality of metallization traces that are defined in the first part of the metallization layer of the package structure. The circuit also includes a spiral inductor trace that is formed from the metallization layer of the package structure and is defined in the first part of the metallization layer. Selected ones of the array of bumps are electrically interconnected to a first end of the spiral inductor trace and to a second end of the spiral inductor trace, such that selected ones of the array of bumps electrically interconnect the spiral inductor trace of the package structure to the semiconductor die and to selected ones of the first plurality of metallization traces. Furthermore, spiral inductor that is part of the package structure has a significantly improved quality factor "Q" and self-resonant frequency compared to a die fabricated inductor. However, Shenoy, similarly to Roberts and Samuels, neither discloses nor suggests that "all the local frequencies necessary for these five mixers are obtained from a very stable single reference oscillator" as recited in claims 1 and 6 of the present claimed invention.

As the individual systems of Roberts, Samuels and Shenoy neither disclose nor suggest that “all the local frequencies necessary for these five mixers are obtained from a very stable single reference oscillator” as recited in claims 1 and 6 of the present claimed invention, the combination of Roberts, Samuels and Shenoy also cannot disclose or suggest this feature. Thus, it is therefore clear that neither of the cited references taken either singly or in combination affect the patentability of Claims 1 and 6 which claim the use of a single reference oscillator to generate all the local frequencies. Thus, it is respectfully submitted that claims 1 and 6 are patentable over Roberts, Samuels and Shenoy when taken alone or in combination.

In view of the above remarks to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure in Roberts et al., Samuels and Shenoy, when taken alone or in combination, that would make the present invention as claimed in claims 1 and 6 unpatentable. As claims 3-5, 8 and 9 are dependent on claims 1 and 6, respectively, it is respectfully submitted that these claims are also patentable. In view of the above remarks it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections, it is believed that, in view of the amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

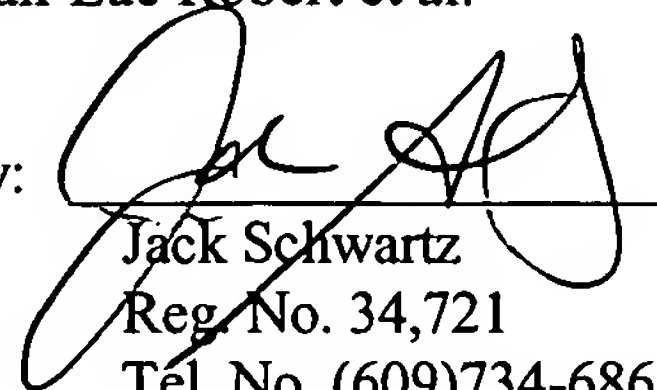
Application Serial No. 10/520,721

Attorney Docket No. PF020085

No additional fee is believed due. However, if a fee is due, please charge the fee to
Deposit Account 07-0832.

Respectfully submitted,
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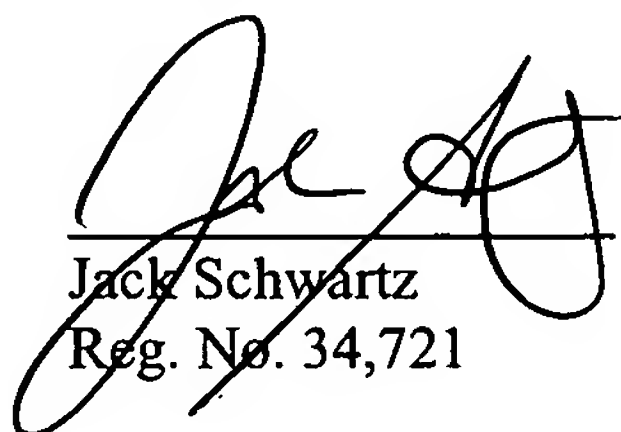
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